

(2) identifying within said gene-containing DNA sequence, a polyketide synthase domain encoding for an enzymatic activity;

(3) introducing one or more specified changes into said polyketide synthase domain resulting in an altered DNA sequence;

(4) introducing said altered DNA sequence into a polyketide-producing microorganism to replace an original sequence;

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Cont

(5) growing a culture of the altered microorganism under conditions suitable for the formation of the specific polyketide analog; and

(6) isolating said specific polyketide analog from the culture.

73. (Amended). The method of claim 72 wherein said DNA sequence is isolated from a genus selected from the group consisting of *Actinomyces*, *Dactylosporangium*, *Micromonospora*, *Nocardia*, *Saccharopolyspora*, *Streptoverticillium*, and *Streptomyces*.

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77. (Amended). The method of claim 57 wherein said polyketide is selected from the group consisting of macrolides, tetracyclines, polyethers, polyenes, ansamycins and derivatives or analogs thereof.

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81. (Amended). The method of claim 57 wherein said DNA sequence, designated *eryA*, encodes a protein having enzymatic activities associated with the formation of 6-deoxyerythronolide B.

82. (Amended). The method of claim 57 wherein said gene-containing DNA sequence encodes one or more proteins having enzymatic activities in the rapamycin biosynthetic pathway.

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83. (Amended). The method of claim 57 wherein said polyketide is a rapamycin analog.